UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,427	10/13/2005	Shinichi Tanaka	112857-590	9480

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EXAMINER
NICKERSON, JEFFREY L

ART UNIT	PAPER NUMBER
2442	

NOTIFICATION DATE	DELIVERY MODE
12/30/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chicago.patents@klgates.com

	Application No.	Applicant(s)
Office Action Summary	10/549,427	TANAKA ET AL.
	Examiner	Art Unit	
	JEFFREY NICKERSON	2442	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *18 August 2009*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *23-37* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *23-37* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This communication is in response to Application No. 10/549,427 filed nationally

on 13 October 2005 and internationally on 02 February 2005. The response presented

on 18 August 2009, which amends claims 23, 26, 29, adds claims 32-37, and presents

arguments, is hereby acknowledged. Claims 23-37 are currently pending.

35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

Claim Rejections

3.   Claims 23-37 are rejected under 35 U.S.C. 112, first paragraph, because the

specification, while being enabling for "*generating… information process apparatus

identification information **when a power is turned on**", does not reasonably provide

enablement for *"generating … information process apparatus identification information

upon powering on [of the apparatus]"*. The specification does not enable any person

skilled in the art to which it pertains, or with which it is most nearly connected, to make

or use the invention commensurate in scope with these claims.

Applicant asserts support for newly amended claim language with a citation to

paragraph [0084] of the specification and a quotation of the specification. The

specification does not have paragraph numbers. Regardless of such a formality, the

examiner found the referenced quotation on pg 14, paragraph 3 of the specification.

This rejection is based on the differences in interpretation of the words "when" and

"upon". The use of the phrase "upon powering on" implies that the generation is in

response to the power switching into an on state. The phrase used in the specification,

"when a power is turned on" implies that the generation occurs at anytime during the

duration of the power being in an on state (which may be in response to switching into

an on state, but not necessarily). Thus, one of ordinary skill in the art, at the time of the

invention and upon reading applicant's specification, would not be enabled to make or

use the claimed invention, as the specification does not provide support for "*generating*

… upon powering on the apparatus".

35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Response to Arguments

5.   Applicant's arguments, filed in the response dated 18 August 2009, with respect

to the rejections of claims 23-31 under 35 USC 103(a) have been fully considered and

are persuasive. Therefore, the rejections have been withdrawn. However, upon further

consideration, new grounds of rejection may appear below.

Claim Rejections

6.   Claims 23-31, 33, 35, and 37 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Tan et al (US 5,978,560), and in further view of Gnanasivam et al

(US 6,728,905 B1), Liu et al (US 5,031,089), Lea et al (US 6,314,447 B1), and Holle et

al (US 6,535,977 B1).

Regarding claim 23, Tan teaches an information processing apparatus (print

server/supervisor), which is coupled to a plurality of other information processing

apparatuses (other printers/output devices) through a network, transmitting a software

cell including a command (job ctrl) and a program (job data) to the other information

processing apparatuses, and carrying out network distributed processing (Tan: abstract,

Figure 1, Figure 3, col 2, lines 45-64), the information processing apparatus comprising:

        capability exchange means for collecting information regarding resources and

operating statuses of the other information processing apparatuses and creating an

apparatus information table by transmitting software cells to all the other information

processing apparatuses on the network (Tan: abstract; col 3, line 57 – col 4, line 23),

wherein the apparatus information table includes apparatus data associated with all the

other information processing apparatuses when the information processing apparatus is

in a particular state (Tan: col 3, line 57 – col 4, line 23), and wherein the apparatus

information table includes identifications associated with all the other information

processing apparatuses and the statuses associated with all the other information

apparatuses on the network when the information processing apparatus is in a

particular state (Tan: col 3, line 57 – col 4, line 23), the software cells requesting

transmissions of information regarding the other information processing apparatuses

and receiving software cells as replies from the other information processing

apparatuses (Tan: col 5, lines 51-55);

wherein the apparatus data includes information processing apparatus

identification information (Tan: col 4, lines 1-5);

apparatus specifying means for comparing information regarding a resource

required to execute a function program, with information regarding the resource and the

operating status in the apparatus information table, and specifying one of the

information processing apparatuses capable of executing the function program if the

function program retained in the information processing is executed (Tan: col 5, line 32

– col 6, line 38); and

processing requesting means for transmitting a software cell requesting an

execution of the function program to the information processing apparatus specified in

the apparatus specifying means (Tan: abstract; col 5, line 32 – col 6, line 38).

Tan does not teach wherein the information processing apparatus includes a

master/slave status;

wherein a particular status is a master status;

wherein a particular status is a slave status;

wherein the capability exchange means further exchanges information regarding capability with the other information processing apparatuses by transmitting the software cell including information regarding own apparatus as the reply to the other information processing apparatus if the information processing apparatus receives the software cell requesting the transmission of information regarding the information processing apparatus from the other information processing apparatus;

wherein the capability exchange means, upon connection to the network of an additional information processing apparatus which was not previously connected to the network, collects classification identification information of said information processing apparatus, said classification identification information indicating at least one of a feature and a function of said information processing apparatus; or

wherein device identification information is generated upon powering on of said device.

Gnanasivam, in a similar field of endeavor, teaches wherein the information processing apparatus includes a master/slave status (Gnanasivam: col 15, lines 30-63);

wherein a particular status is a master status (Gnanasivam: col 15, lines 30-63; See also col 16, lines 6-16); and

wherein a particular status is a slave status (Gnanasivam: col 15, lines 30-63; See also col 16, lines 6-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Gnanasivam for maintaining master/slave status information. The teachings of Gnanasivam, when implemented in the Tan

system, will allow one of ordinary skill in the art to maintain master/slave statuses of devices in a printing environment. One of ordinary skill in the art would be motivated to utilize the teachings of Gnanasivam in the Tan system in order to easily identify which devices are a master or a slave device via a lookup table.

The Tan/Gnanasivam system does not teach wherein the capability exchange means further exchanges information regarding capability with the other information processing apparatuses by transmitting the software cell including information regarding own apparatus as the reply to the other information processing apparatus if the information processing apparatus receives the software cell requesting the transmission of information regarding the information processing apparatus from the other information processing apparatus;

wherein the capability exchange means, upon connection to the network of an additional information processing apparatus which was not previously connected to the network, collects classification identification information of said information processing apparatus, said classification identification information indicating at least one of a feature and a function of said information processing apparatus; or

wherein device identification information is generated upon powering on of said device.

Liu, in a similar field of endeavor, teaches wherein the capability exchange means further exchanges information regarding capability with the other information processing apparatuses by transmitting the software cell including information regarding own apparatus as the reply to the other information processing apparatus if the

information processing apparatus receives the software cell requesting the transmission

of information regarding the information processing apparatus from the other

information processing apparatus (Liu: abstract specifies all nodes may poll one another

for load information).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Liu for load balancing an trading load

information on a decentralized network. The teachings of Liu, when implemented in the

Tan/Gnanasivam system, will allow one of ordinary skill in the art have each printer

maintain its load information and perform supervisory activities in a decentralized

fashion. One of ordinary skill in the art would be motivated to utilize the teachings of Liu

in the Tan/Gnanasivam system in order to allow any device to receive a client command

for processing and eliminate a single point of failure.

The Tan/Gnanasivam/Liu system does not teach wherein the capability

exchange means, upon connection to the network of an additional information

processing apparatus which was not previously connected to the network, collects

classification identification information of said information processing apparatus, said

classification identification information indicating at least one of a feature and a function

of said information processing apparatus; or

wherein device identification information is generated upon powering on of said

device.

Lea, in a similar field of endeavor, teaches wherein the capability exchange

means, upon connection to the network of an additional information processing

apparatus which was not previously connected to the network, collects classification

identification information (self-describing data SSD) of said information processing

apparatus (Lea: Figure 8, steps 810-814; col 11, lines 5-34); and

wherein said classification identification information indicating at least one of a

feature and a function of said information processing apparatus (Lea: Figure 9, item

320; Figure 5; col 6, lines 11-18; col 8, lines 10-61).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Lea for obtaining self-describing data

from newly connecting devices indicating features and functionality. The teachings of

Lea, when implemented in the Tan/Gnanasivam/Liu system, will allow one of ordinary

skill in the art have each printer maintain its capable features and functions, current load

information, and perform supervisory activities in a decentralized fashion. One of

ordinary skill in the art would be motivated to utilize the teachings of Lea in the

Tan/Gnanasivam/Liu system in order to allow the network to identify new functionalities

of newly connecting devices.

The Tan/Gnanasivam/Liu system does not teach wherein device identification

information is generated upon powering on of said device.

Holle, in a similar field of endeavor, teaches wherein device identification

information is generated upon powering on of said device (Holle: Figure 6, step 605; col

8, line 64 – 19 provide it's generated during the boot process).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Holle for generating a unique device ID at

startup. The teachings of Holle, when implemented in the Tan/Gnanasivam/Liu/Lea system, will allow one of ordinary skill in the art have each printer generate its own unique ID at a time of powering on and booting. One of ordinary skill in the art would be motivated to utilize the teachings of Holle in the Tan/Gnanasivam/Liu/Lea system in order to allow easy cloning of distributed processing devices in a master/slave setup.

Regarding claim 24, the Tan/Gnanasivam/Liu/Lea/Holle system teaches wherein the capability exchange means, upon connection to the network of the additional information processing apparatus which was not previously connected to the network, collects information regarding a resource and an operating status of the additional information processing apparatus and updates the apparatus information table (Lea: col 11, lines 5-64 for collecting capability information of newly connecting device and updating table; Liu: abstract for wherein capability information is the operating status).

Regarding claim 25, the Tan/Gnanasivam/Liu/Lea/Holle system teaches wherein the other information processing apparatus has a plurality of processors for processing the function program (Liu: col 3, lines 19-38 provides for multiprocessor nodes); and

wherein the capability exchange means collects information regarding a resource and an operating status of each of the plurality of processors, and saves the information in the apparatus information table (Tan: abstract; col 5, line 32 – col 6, line 38 for obtaining resource and operating status of a particular component; Liu: col 3, lines 19-38 for wherein component is each processor).

Regarding claim 26, this method claim contains limitations corresponding to that of claim 23 and the same rationale of rejection is used, where applicable.

Regarding claim 27, this method claim contains limitations corresponding to that of claim 24 and the same rationale of rejection is used, where applicable.

Regarding claim 28, this method claim contains limitations corresponding to that of claim 25 and the same rationale of rejection is used, where applicable.

Regarding claim 29, this system claim contains limitations corresponding to that of claim 23 and the same rationale of rejection is used, where applicable.

Regarding claim 30, this system claim contains limitations corresponding to that of claim 24 and the same rationale of rejection is used, where applicable.

Regarding claim 31, this system claim contains limitations corresponding to that of claim 25 and the same rationale of rejection is used, where applicable.

Regarding claim 33, the Tan/Gnanasivam/Liu/Lea/Holle system teaches wherein, upon disconnection from the network of an information processing apparatus in a master status, at least one of the other information processing apparatuses in a slave status

changes to a master status based, at least in part, on a comparison of the information

processing apparatus identification information of said information processing apparatus

which changes status and the information processing apparatus identification

information of all the other information processing apparatuses (Gnanasivam: Figure 17,

steps 1710 to 1735; col 17, lines 43-55 for monitoring via hearbeat; col 18, lines 22-31

for when master fails (note that step 428 is a typo, and should be 425 as there is no

428); Figure 4, step 425 for arbitration mechanism; col 15, lines 31-43 for arbitration

using relative node IDs).

Regarding claim 35, this method claim contains limitations found within that of claim 33

and the same rationale of rejection is used, where applicable.

Regarding claim 37, this system claim contains limitations found within that of claim 33

and the same rationale of rejection is used, where applicable.

7.   Claims 32, 34, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Tan et al (US 5,978,560); in view of Gnanasivam et al (US 6,728,905 B1), Liu et al

(US 5,031,089), Lea et al (US 6,314,447 B1), and Holle et al (US 6,535,977 B1); and in

further view of Kreisel et al (US 6,088,516).

Regarding claim 32, the Tan/Gnanasivam/Liu/Lea/Holle system teaches wherein

information processing apparatus identification information of the information processing

apparatus is generated by the information processing apparatus based on a random

number, and wherein the generation is at a time of powering on the information

processing apparatus (Holle: Figure 6, step 605; col 8, line 64 – 19).

The Tan/Gnanasivam/Liu/Lea/Holle system does not teach wherein the random

number is based upon the current time.

Kreisel, in a similar field of endeavor, teaches wherein the random number is

based upon the current time (Kreisel: Figure 5, step 606; col 11, lines 59 - col 12, line

12 provide for seeding based on current time).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Kreisel for seeding the random number

generator based on current system time. The teachings of Kreisel, when implemented in

the Tan/Gnanasivam/Liu/Lea/Holle system, will allow one of ordinary skill in the art to

seed a random number generator based on the current time during boot of a clone

slave device. One of ordinary skill in the art would be motivated to utilize the teachings

of Kreisel in the Tan/Gnanasivam/Liu/Lea/Holle system in order to enable practicing the

invention with stereotypical seeding practices.

Regarding claim 34, this method claim contains limitations found within that of claim 32

and the same rationale of rejection is used, where applicable.

Regarding claim 36, this system claim contains limitations found within that of claim 32

and the same rationale of rejection is used, where applicable.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 9:00am - 7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571)272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./
Examiner, Art Unit 2442
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